

## WEATHER OF THE MONTH.

551.506 (261.1)

## WEATHER OF NORTH AMERICA AND ADJACENT OCEANS.

## NORTH ATLANTIC OCEAN.

By F. A. YOUNG.

The average pressure for the month was very much above the normal at land stations on the coasts of Newfoundland, Canada, New England, the Bermudas, and the Azores. It was slightly higher than usual along the south Atlantic coast of the United States and the Gulf of Mexico, as well as in the southern portion of the British Isles, and nearly normal or slightly below at certain stations in the West Indies and in northern European waters.

Fog was apparently rare on the steamer lanes and in European waters, while it was observed on from 3 to 5 days in different 5-degree squares on the Banks of Newfoundland and along the American coast, which is considerably below the normal for that locality.

The number of days with winds of gale force was not far from the normal over the greater part of the ocean, being slightly below in some sections and above in others.

With a few exceptions the weather over the ocean during the first decade of the month was moderate in character, with the Azores high well developed, and the pressure well above the normal over the greater part of the steamer lanes. On the 10th there was a well-developed low central near St. Johns, N. F., and a number of vessels along the American coast, between Nantucket and Hatteras, experienced moderate gales with comparatively high barometric readings. The following storm logs are from the few vessels that experienced heavy weather during the period from the 1st to the 10th.

*American S. S. Ampetco:*

Gale began on the 3d, wind WSW. Lowest barometer 29.87 inches at 11 p. m. on the 3d; position, latitude 48° 36' N., longitude 31° 53' W.; shifts of wind near time of lowest barometer, WSW.-W.-WNW. Highest force of wind 10, WSW.

*British S. S. Kabinga:*

Gale began on the 4th, wind NW. Lowest barometer 29.89 inches at noon on the 4th; position, latitude 40° 44' N., longitude 67° 50' W. End of gale on the 5th, wind N. Highest force 9, NW.; shifts NW.-W.

*British S. S. Imperator:*

Gale began on the 4th, wind W. Lowest barometer 29.64 inches at midnight on the 4th; position, latitude 41° 06' N., longitude 57° 10' W. End on the 5th, wind NW. Highest force of wind 9, S.; shifts S.-W.-NW.

*American S. S. Ampetco:*

Gale began on the 5th, wind SSW. Lowest barometer 29.65 inches at 2 p. m. on the 6th; position, latitude 46° 50' N., longitude 40° 32' W. End of gale on the 6th, wind NW. Highest force of wind 11, W.; shifts SW.-W.-WNW.

*American S. S. Ampetco:*

Gale began on the 7th, wind SSW. Lowest barometer 30.12 inches at midnight on the 7th; position, latitude 44° 55' N., longitude 47° 41' W. End of gale on the 8th; wind WSW. Highest force 9, WSW.; shifts WSW.-NNW.

*American S. S. W. M. Burton:*

Gale began on the 9th, wind NW. Lowest barometer 30.08 inches at 4 a. m. on the 10th; position, latitude 37° N., longitude 75° W. End at 9 a. m. on the 10th, wind NNE. Highest force 10, N.; shifts, steady from N.

As can be seen from the above logs, the *Ampetco* was exceptionally unfortunate, as she encountered three distinct disturbances in six days, while storm reports were received from only three other vessels during the first decade of the month.

From the 11th to the 17th there was a disturbance over the eastern portion of the steamer lanes; the storm area extended from the 45th meridian to the European coast, north of the 40th parallel, and moved but little during this period. Unfortunately there were unusually few reports received from the northeastern section of the ocean, and it was impossible to determine the center or northern limits of this disturbance. From the 13th to the 16th unusually low barometer readings were recorded at the land stations in Iceland, and during that period the center of the low was probably not far from that island.

Charts IX, X, XI, XII, and XIII show the conditions for March 12, 13, 14, 15, and 16, respectively.

Storm logs follow:

*British S. S. Strathearn:*

Gale began on the 11th, wind SW. Lowest barometer 29.26 inches at noon on the 11th, wind W., 7; position, latitude 48° 08' N., longitude 30° 32' W. Same reading at 9 a. m. on the 14th, wind WSW.; position, latitude 45° 14' N., longitude 33° 26' W. End of gale on the 15th, wind WSW. Highest force of wind 12, WSW.; shifts W.-WSW.-W.

*British S. S. Mackinaw:*

Gale began on the 11th; wind W. Lowest barometer 29.33 inches at 7 a. m. on the 12th, wind SSW., 10; position, latitude 49° 27' N., longitude 12° 30' W. End of gale on the 17th, wind NW. Highest force of wind 12, W.; shifts WSW.-W.

*American S. S. Editor:*

Gale began on the 13th; wind SW. Lowest barometer 29.48 inches at 8 a. m. on the 14th, wind WSW.; position, latitude 43° 20' N., longitude 35° 10' W. End on the 17th. Highest force of wind 10, W.; shifts SSW.-W.-WNW.

*Danish S. S. Oscar II:*

Gale began on the 14th, wind SSW. Lowest barometer 28.72 inches at 9 a. m. on the 15th, wind SW.; position, latitude 57° 45' N., longitude 15° 30' W. End on the 18th. Highest force of wind 10, SW.; shifts not given.

*Swedish S. S. Stockholm:*

Gale began on the 15th, wind NW. Lowest barometer 29.59 inches at noon on the 16th, wind NW.; position, latitude 50° 21' N., longitude 37° 15' W. End of gale on the 17th, wind WNW. Highest force of wind 10, NW.; shifts not given.

On the 18th there was a moderate disturbance, central about 200 miles south of Halifax, N. S. This low drifted slowly eastward, increasing slightly in intensity, and on the 19th a number of vessels between the 40th and 60th meridians encountered moderate to strong gales, while others in the same region reported weather of less severity.

The storm log from the American S. S. *Calvert* follows:

Gale began on the 18th, wind SW. Lowest barometer 29.35 inches at 2 p. m. on the 18th, wind S., 12; position, latitude 39° 30' N., longitude 59° W. End of gale on the 20th, wind NNE., 6. Highest force of wind 12, S.; shifts SW.-S.-SW.-S.-NW.

Extract from Daily Journal of the Dutch S. S. *New York*:

March 18: Good weather, wind shifting from NNW. through east to SSW. At 10 a. m. wind and sea increasing, barometer at noon, 29.75 inches, wind SSW., 6. At 2.40 p. m., 29.49 inches, SW., 11. At 2.50 p. m. the wind was blowing with considerable force, accompanied by heavy hail squalls, lightning, and thunder. At 3 p. m. barometer rising and wind decreasing. During the whole night westerly winds, force 8. At 7 p. m., barometer 29.75 inches. Noon position, latitude 39° 02' N., longitude 59° 18' W.

March 19: Strong westerly gales and high seas. During the whole day rain squalls.

From the 21st to the 26th reports were received from vessels that encountered westerly gales in the region

between the 20th meridian and the coast of Scotland, with the pressure at Iceland considerably below the normal, the barometer at Reykjavik reading as low as 28.39 inches on the 23d. Storm logs are as follows:

**British S. S. *Malvern Range*:**

Gale began on the 20th, wind S. Lowest barometer 29.58 inches at 3 a. m. on the 23d, wind WSW., 11; position, latitude 58° 20' N., longitude 16° W. End on the 23d, wind variable. Highest force of wind 11, WSW.; shifts S.-W.-SW.-SSE.-WSW., variable.

**British S. S. *Malvern Range*:**

Gale began on the 24th, wind NNW. Lowest barometer 29.91 inches at 4 a. m. on the 26th, wind WNW., 10; position, latitude 56° N., longitude 22° W. End of gale on the 26th, wind SW. Highest force of wind 11, W.; shifts NNW.-W.-WNW.-WSW.

On the 22d and 23d there was a well developed LOW, central near the center of the steamer lanes, the storm area extending from the 40th to 50th parallels, and from the 25th to 45th meridians. Storm logs follow:

**British S. S. *Canada*:**

Gale began on the 21st, wind SW. Lowest barometer 29.60 inches at 10 a. m. on the 22d; position, latitude 45° N., longitude 40° W. End of gale on the 23d, wind NW. Highest force of wind 10, SW.; shifts SW.-W.

**Belgian S. S. *Gothland*:**

Gale began on the 22d, wind SW. Lowest barometer 29.63 inches at 6 a. m. on the 23d, wind WNW.; position, latitude 45° 09' N., longitude 37° 02' W. End of gale on the 23d, wind NW. Highest force of wind 9, W. Shifts SW.-WNW.

The observer on the British S. S. *Canada* reports that at 6 a. m. March 24, near latitude 42° 37' N., longitude 52° 16' W., the vessel steamed through tide rips extending to the horizon in a northwesterly direction. Temperature of water on northerly side 29° F., and after passing through the line of ripples, 33° F.

A good example of the "zone of silence" is given by the observer on the British S. S. *Strathearn*, who states that on March 25, steering 182°, he heard Nantucket Shoal light vessel fog signal distant 5 miles, very faint ahead; it got louder until 2 miles away when signal ceased to be heard until on starboard beam one-half mile distant. The whistling buoy was heard at a distance of 2 miles and until well past the beam. Position checked by soundings and wireless direction stations.

On March 26 a moderate disturbance was central near latitude 40° N., longitude 42° W.

The storm log from the British S. S. *Caledonia* follows:

Gale began on the 25th, wind NE. Lowest barometer 29.90 inches at 4 p. m. on the 26th, wind N., 7; position, latitude 42° 11' N., longitude 45° 47' W. End of gale 4 a. m. on the 27th, wind ENE. Highest force of wind 8, NE.; shifts NE.-N.

On the 28th and 29th there was a disturbance some distance west of the coast of Scotland, although it was impossible to determine its center and extent accurately, on account of lack of observations.

Storm logs follow:

**British S. S. *Malvern Range*:**

Gale began on the 27th, wind NW. Lowest barometer 29.76 inches at 3 a. m. on the 28th, wind NW., 10; position, latitude 53° N., longitude 29° W. End of gale on the 29th, wind NW. Highest force of wind 10, NW.; steady from NW.

**American S. S. *Satartia*:**

Gale began on the 28th, wind W. Lowest barometer 29.83 inches at 2.45 p. m. on the 28th, wind NW.; position, latitude 47° 44' N., longitude 15° 28' W. End of gale on the 29th. Highest force of wind, 10, NW.; shifts W.-NW.

On the 29th there was a LOW central near Sydney, Nova Scotia, with moderate winds along the American coast north of the 40th parallel, while vessels between New York and Charleston encountered northerly and

northwesterly gales. This disturbance moved slowly eastward and on the 30th the center was about 200 miles southeast of St. John's N. F., and moderate to strong northerly gales prevailed near the 40th parallel, between the 50th meridian and the American coast, while a few vessels west of the Bermudas also reported heavy weather. During the next 24 hours the easterly movement of this LOW was very slight, although on the 31st the storm area was considerably east of its position on the previous day and was confined between the limits of 40th and 47th parallels, and the 37th and 50th meridians.

Storm logs follow:

**American S. S. *Pennsylvania*:**

Gale began on the 28th, wind NW. Lowest barometer 30 inches at 7 p. m. on the 28th, wind NW., 10; position, latitude 39° 20' N., longitude 74° 10' W. End of gale on the 29th, wind NW. Highest force of wind, 11, NW.; shifts SW.-NW.

**American S. S. *Halsey*:**

Gale began on the 29th, wind NE. Lowest barometer 30.05 inches at 10 a. m. on the 29th, wind NE., 7; position, latitude 35° M., longitude, 75° W. End of gale at 10 p. m. on the 29th, wind NE. Highest force of wind 9, NE.; shifts S.-W.-NE.

**American S. S. *Henry Steers*:**

Gale began on the 30th, wind SW. Lowest barometer 29.51 inches at 6 a. m. on the 30th, wind NW., 9; position, latitude 40° 47' N., longitude 51° 20' W. End of gale on the 31st, wind NW. Highest force of wind 10, NNW.; shifts SW.-NW.

**American S. S. *Montana*:**

Gale began on the 29th, wind N. Lowest barometer 29.61 inches at 8 a. m. on the 29th, wind N., 9; position, latitude 41° 08' N., longitude 59° 30' W. End of gale on the 30th, wind NNW. Highest force of wind 10, N.; shifts SW.-N.-NNW.

**Dutch S. S. *Kroonland*:**

Gale began on the 30th, wind SSW. Lowest barometer 29.71 inches at 2 p. m. on the 30th, wind SSW., 8; position, latitude 45° 31' N., longitude 36° 30' W. End of gale on April 1, wind NW. Highest force of wind 9, WSW.; steady from WSW.

551.506 (265.2)

NORTH PACIFIC OCEAN.

By F. G. TINGLEY.

At Midway Island pressure was above normal from the 1st to the 4th, below from the 6th to the 19th, except the 12th, and above from the 20th to the end of the month, except on the 25th. In amount the departures were moderate. At Honolulu pressure was below normal generally during the first and third decades, and below during the second decade. Here, also, the departures were moderate in amount. At Dutch Harbor pressure was almost continuously above normal, the average daily excess amounting to about 0.18 inch.

The number of gales reported was about the same as in 1919 and 1920, but they were of greater intensity. They occurred principally during the second and third decades, the weather of the first ten days of the month being relatively quiet so far as shown by the reports that have been received.

The principal disturbance of the month appears to have been one that developed to the east of Japan during the 13th and 14th through the merging of several small depressions which formed in the western part of the east China Sea and over central China on the 11th. On the 12th these cyclonic centers were disposed so as to form a trough-like depression covering the area from the northern Philippines to central Japan.

A number of vessels were involved in this disturbance, and experienced gales on several days, the wind at time